```c
#include <stdio.h>

int
main()
{
  int k;
  double p1 , p2 , p3 , p4 , p5 , p6;
  double a1 , a2;
  double m1 , m2;
  double const CONVERGE_TOL = 0.1;
  double delta , old_val;
  int i_count=0;
  p1 = 0; p2 = 0; p3 = 0; p4 = 0; p5 = 0; p6 = 0;
  delta = 1e16;

  while( delta > CONVERGE_TOL )
  {
    old_val = p1-p2;

    /* apply rule "I" */
    p2 -= 1000.0;
    p1 += 1000.0;

    /* apply rule "X" to intersection cells */
    a1 = (p1 + p3 + p5)/3;
    p1 = p3 = p5 = a1;
    a2 = (p2 + p4 + p6)/3;
    p2 = p4 = p6 = a2;

    /* apply rule "R" to resistive elements; */
    /* specifically R1 = 200 Ohms, R2 = 400 Ohms */
    m1 = (p3 - p4)/200.0;
    p3 -= m1;
    p4 += m1;
    m2 = (p5 - p6)/400.0;
    p5 -= m2;
    p6 += m2;

    fprintf( stdout , "p1 %10.2f\tp2 %10.2f\tp1-p2 %10.2f\n" , p1 , p2 , p1-p2 );
    fprintf( stdout , "p3 %10.2f\tp4 %10.2f\tp3-p4 %10.2f\n" , p3 , p4 , p3-p4 );
    fprintf( stdout , "p5 %10.2f\tp6 %10.2f\tp5-p6 %10.2f\n" , p5 , p6 , p5-p6 );

    /* check for convergence */
    delta = (p1-p2) - old_val;
    i_count++;

    fprintf( stdout , "iteration[%d] delta=%g \n\n" , i_count , delta );
  }
}

/*
p1      333.33   p2     -333.33   p1-p2      666.67
p3      330.00   p4     -330.00   p3-p4      660.00
p5      331.67   p6     -331.67   p5-p6      663.33
iteration[1] delta=666.667

p1      665.00   p2     -665.00   p1-p2     1330.00
p3      658.35   p4     -658.35   p3-p4     1316.70
p5      661.67   p6     -661.67   p5-p6     1323.35
iteration[2] delta=663.333

p1      995.01   p2     -995.01   p1-p2     1990.02
p3      985.06   p4     -985.06   p3-p4     1970.12
```

```
                                      sim1.c
p5      990.03    p6     -990.03   p5-p6    1980.07
iteration[3] delta=660.017

...

p1    66656.69    p2   -66656.69   p1-p2  133313.38
p3    65990.12    p4   -65990.12   p3-p4  131980.24
p5    66323.40    p6   -66323.40   p5-p6  132646.81
iteration[1757] delta=0.100286

p1    66656.74    p2   -66656.74   p1-p2  133313.48
p3    65990.17    p4   -65990.17   p3-p4  131980.34
p5    66323.45    p6   -66323.45   p5-p6  132646.91
iteration[1758] delta=0.0997842
*/
```